

## 세미나 초록

<b>성명</b>	강문성
<b>소속</b>	서강대학교
<b>발표 주제</b>	<b>Patterning Quantum Dot Pixels with "Light"</b>
<b>발표 내용</b>	<p>Electroluminescence from solution processed light-emitting materials such as quantum dots (QDs) or organic luminophores is a suitable photon source for futuristic displays offering hyper-realistic images with free-form factors. Accordingly, a nondestructive and scalable process capable of rendering multicolored light-emitting materials patterns on a scale of several micrometers needs to be established. In this talk, two different nondestructive photopatterning methods for light-emitting materials, especially in focus on QD, are introduced, both of which exploit crosslinking reaction between the ligands of neighboring QDs. The first method exploits photoactivated crosslinking reactions. Using this method, QD films can be directly photocrosslinked through a photomask, and the crosslinked QD patterns can be formed after development step. This method is referred to as a direct photopatterning method. The second method also exploits crosslinking reactions, but this time, it is activated with heat. In this method, photoresist sacrificial patterns are first formed, QD films are deposited and thermally crosslinked, and then photoresist layers are stripped off to leave QD patterns behind. Because this method avoids direct exposure of QDs to light, we refer this method to as an indirect photopatterning method. Different aspects of these two different photopatterning methods will be compared.</p>